

ABSTRACT OF THE DISCLOSURE

A vapor compression air conditioning system, including a heat pump embodiment, provides enhanced dehumidification of supply air to an enclosed space. The refrigerant fluid circuit includes an evaporator and a reheat heat exchanger for controlling temperature and dehumidification of supply air. A variable speed fan motor controls air flow over an outdoor condenser heat exchanger whereby condenser heat exchange may be shifted progressively between the reheat heat exchanger and the condenser heat exchanger. One alternate embodiment includes a thermosiphon system for heat transfer to and from the reheat heat exchanger. Another embodiment includes a bypass air flow control damper for controlling flow of supply air through the evaporator and the reheat heat exchanger.

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